Essential requirements, TSIs and national rules
Scope and content of TSIs – part 1 general

Workshop on Technical Specifications for Interoperability
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Background and legal framework
From national visions to European interoperability

**YESTERDAY**

- International Agreements
  (COTIF, AGC, AGTC, ...)
- International Rules
  (UIC, RIV, RIC, EN standards)
- National Rules
  With or without mutual recognition

**TODAY**

- European Specifications
- European Standards
- National Rules
<table>
<thead>
<tr>
<th>Directive</th>
<th>Description</th>
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<tr>
<td>96/48</td>
<td>Interoperability of the trans-European (TEN) high-speed rail system</td>
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<tr>
<td>2001/16</td>
<td>Interoperability of the trans-European (TEN) conventional rail system</td>
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<tr>
<td>2004/50</td>
<td>Modifying 96/48 and 2001/16</td>
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<td>2007/32</td>
<td>Amending Annex VI of 96/48 and 2001/16</td>
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<td>2008/57/EC</td>
<td>On the interoperability of the rail system within the Community (covering both HS and CR and extended to the whole European Network)</td>
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<td>2011/18/EU</td>
<td>Amending Annexes II, V and VI of 2008/57/EC</td>
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<td>2013/9/EU</td>
<td>Amending Annex III of 2008/57/EC</td>
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The pursuit of this objective must lead to the definition of an optimal level of technical harmonisation and make it possible to:

(a) facilitate, improve and develop international rail transport services within the European Union and with third countries;
(b) contribute to the progressive creation of the internal market in equipment and services for the construction, renewal, upgrading and operation of the rail system within the Community;
(c) contribute to the interoperability of the rail system within the Community.
For the purposes of this Directive, the system constituting the rail system may be broken down into the following subsystems, either:

(a) structural areas:
  - infrastructure,
  - energy,
  - trackside control-command and signalling,
  - on-board control-command and signalling,
  - rolling stock,

(b) functional areas:
  - operation and traffic management,
  - maintenance,
  - telematics applications for passenger and freight services.
This Directive sets out to establish the **conditions to be met to achieve interoperability within the Community rail system in a manner compatible with the provisions of Directive 2004/49/EC**.

These conditions concern the **design, construction, placing in service, upgrading, renewal, operation and maintenance** of the parts of this system as well as the **professional qualifications and health and safety conditions** of the staff who contribute to its operation and maintenance.

**Directive applies to the whole network but possible exclusions are foreseen in art. 1.3**
Directive does not ask directly for standards but intermediate mandatory rules:

**Technical Specifications for Interoperability – TSIs**

‘technical specification for interoperability’ (TSI) means a specification adopted in accordance with this Directive by which each subsystem or part subsystem is covered in order to meet the essential requirements and ensure the interoperability of the rail system (art. 2(i) of the Directive)

Purpose and content of the TSIs is specified in art. 5.3 of the Directive. It is worth to note that:

*a subsystem may be covered by several TSIs and one TSI may cover several subsystems* (art. 5.1 of the Directive)
TSIs and essential requirements
TSIs and the essential requirements

Interoperability Directive
6 Essential Requirements

1. Safety
2. Reliability and availability
3. Health
4. Environmental protection
5. Technical compatibility
6. Accessibility

Mandatory
- Specified in TSIs / NTRs

Voluntary
- Applicant chooses own specification

Level of DETAIL

Company standards
Other public standards and documents
Harmonised EN Standards
Standards directly quoted in TSIs
TSIs + NTRs
Mandatory Rules
Interoperability Directive
Interoperability Directive defines

ESSENTIAL REQUIREMENTS

According to art. 2(g)

‘essential requirements’ means all the conditions set out in Annex III which must be met by the rail system, the subsystems, and the interoperability constituents, including interfaces.
In annex III of the Interoperability Directive general essential requirements are fixed, related to:

- safety,
- reliability and availability,
- health
- environmental protection
- technical compatibility
- accessibility

plus essential requirements specific to each subsystem, related to the above groups as appropriate.
Art. 17.2 of the Directive says:

Verification of the interoperability, in accordance with the essential requirements, of a structural subsystem constituting the rail system shall be established by reference to TSIs, where they exist.

Similarly, according to art. 11.2:

All interoperability constituents shall be subject to the procedure for assessing conformity and suitability for the use indicated in the relevant TSI and shall be accompanied by the corresponding certificate.
Does TSI need to deal **exhaustively** with the essential requirements of the Directive and all the aspects concerning its area of application?

**TSIs should not repeat the requirements, already stated in other, applicable legal documents.**

Moreover, some of the essential requirements, as listed in Annex III of the Directive, pragmatically, should not be addressed by the TSIs.

**Example:**

*Appropriate steps must be taken to prevent access to or undesirable intrusions into installations.* (Annex III p. 2.1.1)

**No detailed requirements can be specified in the TSI INF,** as the ‘appropriate steps’ may be very different, depending on the local conditions.
Content and scope of TSIs - general
The scope of application
Geographically, e.g. TEN lines
Technically, e.g. locomotives and passenger rolling stock
May exclude some types of subsystem

Functional and technical specifications
To meet essential requirements as in Directive
To describe interfaces with other subsystems
May include references to standards

Interoperability constituents
Checked independently from subsystem
E.g. wheel, pantograph,
If an IC is used, it must comply with TSI

Procedures to assess conformity
Used by NoBos
Generic assessment modules

Implementation strategy
To minimise the economical impact
Specific cases for Member States

Both requirements & assessment procedures are mandatory
What parameters and requirements should be specified in the TSI?

An optimum level of technical harmonisation (art. 1.2 of the Directive) is not the same as full harmonisation; the TSI should not try to standardise everything, only what is necessary to deliver the purpose of the Directive.

The TSIs should prescribe the technical requirements necessary to:

a) meet the essential requirements to the extent that the parameter is not, or could not be, addressed elsewhere,

b) deliver interoperability, and

c) deliver an optimum level of harmonisation.
TSIs may take an explicit, clearly identified reference to European or international standards or specifications or technical documents published by the Agency...

These standards or specifications or technical documents shall be regarded as annexes to the TSI concerned and shall become mandatory from the moment the TSI is applicable.

TSIs shall be published by the Commission in the Official Journal of the European Union.

EC DIR 2008/57
Art. 5.8 &
Art. 6.10
The scope of the TSIs shall be progressively extended in accordance with Article 8 to the whole rail system, including track access to terminals and main port facilities serving or potentially serving more than one user, without prejudice to the derogations to the application of TSIs as listed in Article 9 – the new merged (HS&CR) TSIs will enter into force in 2015.
TSIs applicable
The current situation

- LOC& PAS
- NOI
- WAG
- SRT
- PRM
- CCS
- RST
- NOI
- HS INF
- HS ENE
- TAF
- OPE
- TAP
- TAF

Functional
Conventional
Transverse
High speed
TSIs applicable
The situation from 1\textsuperscript{st} January 2015
The extension of the geographical scope

Current set of TSIs:
Apply to High speed and TEN-T lines

New set of TSIs:
Apply to the whole European Network

See article 1 (3) of the I.D. for scope restrictions
National rules and reference documents
National rules are used to ensure that essential requirements are met:

1. Within the scope of TSIs:
   a) open points
   b) specific cases when referring to national rules

2. Outside the scope of TSI:
   a) for vehicles not covered by TSIs
   b) for fixed installations – items not related to interoperability, therefore outside TSIs and usually outside the railway legislation, but applicable to railway too (e.g. sanitary and environmental rules, fire protection rules, construction law etc.)

The national rules within the scope of the ID related to TSIs and cases where TSI are not applicable, need to be notified by MS according to art. 17.3 of the Directive.
Current TSIs – TEN only

From 1st January 2015

Target system - TSIs covering the whole European rail system
National Technical Rules will remain applicable to subsystems in cases defined in the Directive Art 17 (3)

- No relevant TSI exists
  (e.g. existing non-TSI conform network – infrastructure and fixed installations)

- TSIs Open Points

- Specific Cases identified and not fully described in the TSIs

- Derogations
DRAFT NTR

**Dir. 98/34/EC**: MSs are obliged to notify to the Commission and to the other MSs all draft technical regulations (acc. to EU Treaty covering also free movement of goods and services in EU)

MS notify draft TRs to EC TRIS

Technical Rules which are not notified in draft to the EC might not be enforceable (cf. EU judgements)

PUBLISHED/APPLIED NTR

**Dir. 2008/57/EC**: Notification to NOTIF-IT

Implementation in Member State

TSIs

EC ERA

NTRs

RDD

MS

EU Standards

NOTIF-IT
Database to contain NSR (draft, new and in force) and NTR (in use) (limited to Safety and Interop Directives)

Member States are responsible to feed in the rules

It aims at providing to the Commission & ERA a complete view on the railway legislation in EU MS

Maintained by DG MOVE

Available at: https://webgate.ec.europa.eu/risdb/

NOTIF-IT test website at:
https://webgate.acceptance.ec.europa.eu/risdb/home.do
2 steps notification (recommended)

**STEP 1**
- MS submits DRAFT notification
- MS prepares draft notification
- ERA checks draft notification; interaction with MS; changes possible

**STEP 2**
- MS submits OFFICIAL notification
- The Commission validates (or requests clarification / renewal) the notification following official advice from ERA
MS prepares draft notification

1 STEP

MS submits OFFICIAL notification

ERA formally evaluates the notification; no interaction with MS, no changes

The Commission officially validates (or requests clarification / renewal) the notification following official advice from ERA

1 step notification
The European Railway Agency publishes the rules applied for the authorisation of railway vehicles via the National Reference Documents at its website.

**Purpose of the Documents:**

- To publish the national rules applied for the vehicle authorisation
- Basis for the **Comparison and Classification of National Rules** between Member State Authorities
Structure:

- Structure of the parameters: 319 parameters describing all aspects considered within the authorisation of a railway vehicle
  
  (acc. to Decision 2009/965/EC – Detailed list of Parameter)

- Structure of parameters considers also Basic parameter of TSI Loc&Pas

- Additional Parameter - e.g. for Onboard Control Command System of the vehicle

- MSs authority list for all parameter the respective national rules for the authorisation of railway vehicles

- When Cross-Acceptance agreements exists, the national reference documents states the classification agreed between 2 or more NSAs
Migration from Reference Documents to the Reference Document Database

- **Upload of existing information from National Reference Documents into RDD: Rules acc. Parameters; Remarks and other information**
  → ERA (information has to be verified and published by the MS)

- **Publish and maintain/update the information on rules and classifications**
  - Uploading of additional information: description of rule, relationship to national legal framework, supporting documentation, checking methods, checking bodies, certificates,
  → Member State with ERA support

- **Additional information e.g. structures (e.g. functional or system based decomposition)**
  → railway sector
RDD Main Features

Management of National Rules for the Authorisation of vehicles

- Submission/ Modification/ Publication of NTRs
- Comparison & Classification of NTRs
- History of development of NTRs

Management of National Legal Framework

- Modification/ Publication of NLF
- History of development of NLFs

Reports

- National Reference Document (list of published rules)
- Comparison tables (rules and classifications)
- NLF comparison
- Reports necessary for data management

Integration

- Data exchange with EC – Database NOTIF-IT
Set up and administered by the Agency based on COMMISSION DECISION 2011/155/EU

Contains the National Reference Document for all MSs.

National Reference Document consists of rules applied for authorising placing vehicles in service in the respective MS and the agreed classifications of the rules applied in the other MSs.

Each Member State shall publish its national reference document.
WHERE? (Access to RDD and RDD related documents)
Access from the ERA main web page

1. ERA main web page: http://www.era.europa.eu
   › Databases&Registers

2. ERA main web page: http://www.era.europa.eu
   › Core Activities
      › Cross Acceptance
         › Reference Document

   **Part 1: Application guide.** This part refers to the elements included in the Commission Decision 2011/155/EU, and any other information relevant for the management, understanding and use of the reference document.

   **Part 2: National Reference Document.** This includes all national reference documents listing and classifying the equivalence of national rules, one for each Member State, as referred to in Article 3 of Decision 2011/155/EU.

   **Part 3: National Legal Framework.** In accordance with Article 1 of Decision 2009/965/EC, it includes information on the national legal framework applicable to the authorisation of placing in service of vehicles.
Welcome to the reference document database (RDD)

The European Railway Agency makes available the Reference Document Database RDD in order to facilitate the access to the rules applied in conjunction with the authorisation of railway vehicles in the Member States of the European Union plus Norway.

For more information about the usage of this tool, the User Manual can be found at: https://rdd.era.europa.eu/rdd/RDD_UserManual_v3.3.pdf

The Reference Document:

Part 1 The Application Guide

For more information about the Reference Document, Part 1 (the "Application Guide") can be found in the following languages: BG, CZ, DE, DK, EE, EL, EN, ES, FI, FR, HR, HU, IT, LT, LV, NL, NO, PL, PT, RO, SE, SI, SK.

Part 2 National Reference Documents (NRDs)

The information on national technical rules and classifications in RDD is currently under verification on a Member State by Member State basis. Rules in RDD have been validated for the following states:

Norway
Finland
United Kingdom

Portugal
Sweden
Denmark

Slovakia
Hungary

For the following Member States, please refer to the PDF version available on ERA website using the links below:

Austria
Estonia
Italy
The Netherlands

Belgium
France
Latvia
Poland

Bulgaria
Germany
Lithuania
Romania

Czech Republic
Ireland
Luxembourg
Spain

Part 3 National Legal Frameworks (NLFs)

Currently the publication of the NLFs in RDD is pending.

The following Member States have published their NLFs and the PDF versions are available on ERA website:

Austria
Czech Republic
Greece
Latvia
Portugal
Spain

Belgium
Denmark
Hungary
Lithuania
Romania
Sweden

Bulgaria
Estonia
Ireland
Luxembourg
Slovakia
Switzerland

Croatia
Finland
Italy
Ireland
Norway
Slovenia
### Latest NRD Publications

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<tr>
<td>DK</td>
<td>26/09/2014</td>
<td>First publication of National Technical Rules of Denmark</td>
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<tr>
<td>NI</td>
<td>26/06/2014</td>
<td>First publication of national technical rules for the network of Northern Ireland</td>
</tr>
<tr>
<td>SI</td>
<td>14/05/2014</td>
<td>First publication of National Technical Rules of Slovenia</td>
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<tr>
<td>FI</td>
<td>17/02/2014</td>
<td>Corrected HARB rules to right place and took away one rule that is no longer in force.</td>
</tr>
<tr>
<td>UK</td>
<td>18/12/2013</td>
<td>First publication of National Technical Rules of United Kingdom (GB network) part 15/15</td>
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<td>18/12/2013</td>
<td>First publication of National Technical Rules of United Kingdom (GB network) part 14/15</td>
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<td>UK</td>
<td>18/12/2013</td>
<td>First publication of National Technical Rules of United Kingdom (GB network) part 13/15</td>
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<td>UK</td>
<td>18/12/2013</td>
<td>First publication of National Technical Rules of United Kingdom (GB network) part 12/15</td>
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<tr>
<td>UK</td>
<td>18/12/2013</td>
<td>First publication of National Technical Rules of United Kingdom (GB network) part 11/15</td>
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<td>UK</td>
<td>18/12/2013</td>
<td>First publication of National Technical Rules of United Kingdom (GB network) part 10/15</td>
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### Latest NLF Publications

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<tr>
<td>EU</td>
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<td>European Legal Framework v1.6.1</td>
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### NRD Reports

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<td>List of National Technical Rules</td>
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<td>MS Comparison</td>
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### NLF Reports

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<tr>
<td>NLF Global Comparison by KPIs - New</td>
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Please visit RDD and give us your feedback:

http://rdd.era.europa.eu/RDD

A test version of RDD is available at:

http://rdd-tst.era.europa.eu/RDD
Thank you!